Red Hill Bay Restoration

A Brief Resumé of Chris Schoneman

Feb. 2004- current 2012.

Project Leader. Sonny Bono Salton Sea National Wildlife Refuge. Calipatria, CA Responsible for all operations of the SBSS NWR, including budget, administration, recreation, facility maintenance, staffing, public relations, contracting, habitat development, avian disease response. Refuge has 12 permanent and 2 temporary staff including administrative, biology, facility maintenance and tractor and equipment operation staff.

Dec. 1997-Feb. 2004.

Assistant Refuge Manager. San Luis National Wildlife Refuge. Los Banos, CA Responsible for all field operations of the San Luis, Kesterson, West Bear Creek, East Bear Creek, and Freitas Units of the Refuge. This refuge is in the northern San Joaquin Valley and is primarily a wintering waterfowl habitat of over 26,000 acres. Supervised all maintenance staff. Oversaw maintenance of over 100 wetland impoundments, the hunt program with ≈ 10,000 hunters annually, habitat restoration efforts on West and East Bear Creek Units.

June 1992-Dec. 1997.

Refuge Manager. Pahranagat National Wildlife Refuge. Alamo, NV Responsible for all field operations. This refuge is in Southern Nevada and is a wintering waterfowl refuge. Oversaw all maintenance and habitat improvements including farming, a habitat enhancement of 100 acre Upper Lake in a carp removal effort, and Middle Pond levee reconstruction.

Oct. 1988-June 1992.

Biological Technician/Assistant Refuge Manager. Salton Sea NWR. Calipatria, CA. Initially assisted refuge biologist in refuge and Salton Sea contaminant monitoring. Performed or assisted in all bird surveys. Helped manage refuge wetland and farm programs. Assisted in most facility maintenance work.

Education: Bachelor of Science Degree, Wildlife Management, Humboldt State University, Arcata, CA. May 1988.

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A Brief Resumé of Bruce Wilcox

Mr. Wilcox, an ecologist, is IID's Program Manager for the QSA water transfer mitigation program. Bruce has been the manager of the program for approximately 6 years and prior to that was involved in various mitigation programs and projects for over 20 years as a private consultant.

As the Program Manager for the IID's mitigation program he is responsible for the implementation of the water transfer mitigation program. This includes the management of numerous consultants and IID team members as aspects of the mitigation plan are completed. The mitigation measures vary from the development of study and survey protocols for covered species, development of minimization and avoidance practices for those species as well as planning and development of wildlife habitat areas. He is also responsible for the development of air quality mitigation measures as outlined in the existing environmental documents for the water transfer project. Recent habitat creation efforts include the design and construction of a desert pupfish refugium site, restoration of the McKendry Pond site (an aquatic habitat site adjacent to the Salton Sea) and the completion of the 350 acre, Phase I managed marsh complex.

Bruce also acts as IID's Salton Sea coordinator and has been involved in the development of various proposals for Salton Sea restoration and/or mitigation. He has worked closely with the Department of Water Resources and the Department of Fish and Game on the design of the Species Conservation Habitat project. He has also assisted the Sonny Bono team with the design of the Red Hill Bay project and has helped develop the partnership between private sector, local, state and federal government agencies that was formed to promote the project. He has also coordinated efforts with the USGS Salton Sea Science Office and other research groups, both in the development of habitat areas and in the ongoing research and development of management techniques for water quality (selenium and other constituents) as it relates to habitat development.

Thomas W. Anderson

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Education

○ San Diego State University MS - Ecology	Biology/Ecology	2004-2008
○ University of Minnesota BS – Fisheries and Wildlife	Fisheries and Wildlife	1993-1997
○ Humboldt State University Transferred to U of MN	Forestry/Fisheries	1991-1993

Employment History

○ **Wildlife Biologist**
U.S. Fish and Wildlife Service– Calipatria, CA *March 2010 – present*
I am currently Senior Biologist at Sonny Bono Salton Sea National Wildlife Refuge. In this role I supervise the biology staff across a range of habitat management duties and wildlife monitoring. I also assist in the preparation of the Refuge environmental documents such as the Comprehensive Conservation Plan. The focus of the Refuge is providing forage for migratory waterfowl and this is achieved through cultivation of upland fields and moist soil management of seasonal wetlands. Additionally, cattail marshes are managed for the endangered Yuma clapper-rail (*Rallus longirostris yumanensis*), permanent wetlands are managed for breeding terns, and native upland trees are managed for migratory passerines. The Refuge is currently addressing Salton Sea Restoration by reclaiming shallow-water saline habitat that has gone dry with the receding Salton Sea.

○ **Wildlife Biologist/Student Intern**
U.S. Geological Survey – La Quinta, CA *June 2004 – March 2010*
As a Student Career Experience Program (SCEP) student I attended San Diego State University, earning a MS in Ecology, while also participating in research for USGS on an experimental saline shallow-water wetland habitat at the Salton Sea, CA. The research investigated the benefits and risks of using agricultural runoff and Salton Sea water to create wildlife habitat around the perimeter of the declining Salton Sea. The results of this four-year study informed managers involved in Salton Sea Restoration on a variety of topics with regard to creating shallow-water saline habitat when blending Salton Sea water and agricultural waste water including; bird use and invertebrate colonization, water quality and selenium risks, nesting success of shorebirds and terns, predation issues, fish colonization and distribution across a salinity gradient (including endangered desert pupfish, *Cyprinidon macularius*).

○ **Independent Contractor - Wildlife Biologist/Technician**
Salton Sea Authority-Palm Desert, CA *March 2002 – June 2004*
Contracted to represent the Salton Sea Authority in the Wildlife Disease Surveillance Program; a joint effort with the U.S Fish and Wildlife Service, California Department of Fish and Game, U. S. Geological Survey and other agencies at the Salton Sea, CA. Functioned as the primary field representative of the program, conducting regular surveillance of bird populations, responding to avian and fish mortalities, collecting diagnostic specimens, performing necropsies, producing monthly reports, and assisting in numerous research projects. Research project involvement included: radio telemetry of pelicans, terns, and shorebirds, surveys of endangered species, participation in national frog malformation studies, egg collecting for contaminants work, and rehabilitation of diseased birds. Left to return to school and work with USGS.

- **Fisheries Biologist**
  Aquatic Consultants, Albuquerque, NM *October2001 – March 2002*
  Hired as a fisheries biologist at an upstart consulting firm. In the six months of employment I did about two days of biological work. The remainder of the time was spent constructing and maintaining private fishing ponds and water features on golf courses. On the brighter side, I did become a licensed herbicide applicator in the state, gained experience operating various types of heavy equipment, and became proficient at leading crews of reluctant day laborers. Worked for an agreed to six months before leaving.

- **Fish and Wildlife Technician**
  Texas Parks and Wildlife Department – River Studies Program *August 1999 – October2001*
  Worked as part of an interdisciplinary river and stream assessment team whose primary tasks included determining the quantity and quality of water necessary to conserve aquatic ecosystems. This temporary position was created to assist in the Guadalupe River Instream Flow Study; specifically to collect and manage water quality data. This position had a large field component involving: surveying of lotic and riparian habitats, sampling aquatic fauna, sorting and preserving fish and invertebrate samples, collecting water quality data and samples for analysis, and maintaining all sampling equipment. Apart from responsibilities within the River Studies Program, I also assisted in other projects with the Contaminants Assessment Team, Coastal Resources Protection, and Wildlife Division.

- **Research Technician**
  University of Minnesota – Department of Natural Resources *1995-1998*
  While attending the University of Minnesota (UMN) I worked various jobs with the UMN Department of Natural Resources. In one position I assisted a Masters student with his summer field research on the use of migratory pheromones by Sea Lamprey (*Petromyzon marinus*), an exotic parasitic fish of the Great Lakes ecosystem. Through controlled behavioral experiments and lab work we attempted to quantify lamprey attraction to water drawn from known spawning streams, identify chemical agents driving lamprey migration to these streams, and through use of these agents draw them into control water. The overall objective was to find an alternative management technique to disrupt the spawning cycle of these invasive fish. During the remainder of the year I worked as a technician at the UMN Aquaculture Center. Here I maintained water purification and circulation systems required to conduct controlled research of aquatic organisms. I constructed and maintained research apparatus, monitored water quality, maintained health of research subjects, and assisted with data collection. Some of the research projects included: growth rates of tilapia in different intensive recirculating systems, gut evacuation rates of exotic fishes, freshwater mussel parisitology of fish, and hydroponic system evaluation. In addition, I also completed two Undergraduate Research Opportunities Program (UROP) research projects The first project was investigating fish host suitability for the parasitic glochidia of a freshwater mussel. The second project was a biological assessment of an urban watershed using fishes, aquatic invertebrates and water quality data as parameters.